R602.10.1.1 Spacing. Spacing of braced wall lines shall not exceed 35 feet (10,668 mm) on center in both the longitudinal and transverse directions in each story.

Exception: Spacing of braced wall lines not exceeding 50 feet shall be permitted where:

1. The wall bracing provided equals or exceeds the amount of bracing required by Table R602.10.1 multiplied by a factor equal to the braced wall line spacing divided by 35 feet, and

2. The length-to-width ratio for the floor or roof diaphragm does not exceed 3:1.

Q: In order to increase the spacing of the braced wall lines from 35 feet to 50 feet, (1) the wall bracing must be increased by a factor equal to the spacing of the braced wall lines divided by 35 feet, and (2) the length-to-width ratio for the floor or roof diaphragm cannot exceed 3:1. Is the factor and ratio determined using braced wall lines for the entire building?

A: No. If the spacing of the braced wall lines exceeds 50 feet, the provisions of Section R602.10.1.1 are not applicable. Should the spacing of the braced wall lines be between 35 feet and 50 feet, the factor and length-to-width ratio is based on the distance between the braced wall lines that bound the diaphragm, whether it is an interior braced wall line or an exterior braced wall line.